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Item 13.1 of the provisional agenda

Consideration and vote by AC.3 of draft global technical regulations and/or draft amendments to established global technical regulations**Proposal for Amendment 1 to global technical regulation No. 1 (Door locks and door retention components)****Submitted by the representative of the United States of America***

The text reproduced below was adopted by the Working Party on Passive Safety (GRSP) at its fiftieth session to align the text of the global technical regulation (gtr) No. 1 with the latest changes introduced during the rule making procedure which transposed the gtr No. 1 into the final Rule of the United States of America. It is based on document ECE/TRANS/WP.29/GRSP/2011/3, not amended (ECE/TRANS/WP.29/GRSP/50, para. 4). It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Executive Committee (AC.3) for consideration.

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, programme activity 02.4), the World Forum will develop, harmonize and update regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

A. Statement of technical rationales and justification

Section IV, first paragraph, amend to read:

"IV. Discussion of Issues Addressed by the gtr

The proposed gtr provides that certain door retention components on any door leading directly into an occupant compartment, i.e., a compartment containing one or more seating accommodations, must comply with the requirements of the gtr. Tractor trailers are excluded because they do not meet this criterion. Likewise, doors leading into cargo compartments that are separated by a barrier would not be regulated since an individual could not access the occupant compartment through those doors. The gtr addresses common door types; including side doors that open laterally or slide, and rear doors that open laterally or vertically. The gtr excludes folding doors, roll-up doors, detachable doors, and doors that provide emergency egress, as these types of doors would require entirely new test procedures and are not in such common use as to justify the development of new requirements and test procedures. Similarly, the gtr requirements and test procedures have not been evaluated for uncommon door types such as side doors that open vertically (e.g., gull-wing). Thus, for certain vehicle designs, some, but not all doors would be regulated by the gtr. Contracting Parties may choose to address these excluded doors at the national level. However, if an excluded door were to become commonly used, it would be appropriate to propose amending the gtr to encourage harmonization of such national regulations."

B. Text of the regulation

Paragraph 3.1., amend to read:

"3.1. "Auxiliary Door Latch" is a latch equipped with a fully latched position, with or without a secondary latch position, and fitted to a door or door system equipped with a primary door latch system."

Paragraph 3.18., amend to read:

"3.18. "Primary Door Latch" is a latch equipped with both a fully latched position and a secondary latched position and is designated as a "primary door latch" by the manufacturer. The manufacturer may not thereafter change such designation. Each manufacturer shall, upon request, provide information regarding which latches are "primary door latches" for a particular vehicle or make/model."

Paragraph 4.2.2.(b), amend to read:

"4.2.2. ...

(b) a door latch system with a fully latch position and a door closure warning system. The door closure warning system shall be located where it can be clearly seen by the driver."

Paragraph 5.1.3., amend to read:

"5.1.3. Load Test Three (applicable only to back doors that open in a vertical direction)."

Paragraph 5.1.5.1.(d), amend to read:

"5.1.5.1. ...

(d) On back doors:

- (i) Not separate when a load of 11,000 N is applied perpendicular to the hinge face plate (longitudinal test) such that the hinge plates are not compressed against each other (Load Test One).
- (ii) Not separate when a load of 9,000 N is applied perpendicular to the axis of the hinge pin and parallel to the hinge face plate (transverse load test) such that the hinge plates are not compressed against each other (Load Test Two).
- (iii) Not separate when a load of 9,000 N is applied in the direction of the axis of the hinge pin (Load Test Three – only for back doors that open in a vertical direction)."

Paragraph 5.1.5.4. (b), amend to read:

"5.1.5.4. ...

- (b) A door closure warning system shall be provided for those doors. The door closure warning system shall be located where it can be clearly seen by the driver."

Paragraph 5.2.4.2.1., amend to read:

"5.2.4.2.1. A separation which permits a sphere with a diameter of 100 mm to pass unobstructed between the exterior of the vehicle and the interior of the vehicle, while the required force is maintained."

Annex 1

Paragraph 2.1.2.1.1., amend to read:

"2.1.2.1.1. Attach the test fixture to the mounting provisions of the latch and striker. Align the direction of engagement parallel to the linkage of the fixture. Mount the fixture with the latch and striker in the fully latched position in the test machine so as to apply a load perpendicular to the face of the latch."

Paragraph 2.1.2.2.1., amend to read:

"2.1.2.2.1. Attach the test fixture to the mounting provisions of the latch and striker. Align the direction of engagement parallel to the linkage of the fixture. Mount the fixture with the latch and striker in the secondary latched position in the test machine so as to apply a load perpendicular to the face of the latch."

Paragraph 2.2.2.1.1., amend to read:

"2.2.2.1.1. Attach the test fixture to the mounting provisions of the latch and striker. Mount the fixture with the latch and striker in the fully latched position in the test machine so as to apply a load in the direction of the latch opening."

Paragraph 2.2.2.2.1., amend to read:

"2.2.2.2.1. Attach the test fixture to the mounting provisions of the latch and striker. Mount the fixture with the latch and striker in the secondary latched position in the test machine so as to apply a load in the direction of the latch opening."

Paragraph 2.3., amend to read:

"2.3. Load Test Three (only for back doors that open in a vertical direction)"

Paragraph 2.3.2.1., amend to read:

"2.3.2.1. Attach the test fixture to the mounting provisions of the latch and striker. Mount the fixture with the latch and striker in the fully latched position in the test machine so as to apply a load in the direction specified in paragraph 5.1.3. of this regulation and Figure 1-4."

Figure 1 - 3, the title, amend to read:

"Figure 1-3 - Door Latch – Tensile Testing Fixture for Load Test 3 (only for back doors that open in a vertical direction)"

Annex 2

Paragraph 2.3.2.4., amend to read:

"2.3.2.4. Ensure that the door latch is in the fully-latched position, that the door is unlocked (doors may be tethered to avoid damaging the recording equipment), and that the window, if provided, is closed."

Paragraph 2.3.3.5., amend to read:

"2.3.3.5. Vertical Setup 1. (Only for back doors that open in a vertical direction)...."

Paragraph 2.3.3.6., amend to read:

"2.3.3.6. Vertical Setup 2. (Only for back doors that open in a vertical direction)...."

Annex 3

Paragraph 2.1.3., amend to read:

"2.1.3. Vertical load test (Only for backdoors that open in a vertical direction)."

Annex 4

Paragraph 3.2., amend to read:

"3.2. Remove seats and any interior components that may interfere with the mounting and operation of the test equipment and all pillar trim and any non-structural components that overlap the door and cause improper placement of the force application plates."

Paragraph 3.3., amend to read:

"3.3. Mount the force application devices and associated support structure to the floor of the test vehicle. Each force application device and associated support structure is rigidly fixed on a horizontal surface on the vehicle floor, while applying the loads."

Paragraph 3.6.1., amend to read:

"3.6.1. The force application plate is 150 mm in length, and 50 mm in width, and at least 15 mm in thickness. The plate edges are rounded to a radius of 6 mm \pm 1 mm."

Insert a new paragraph 3.6.1.1., to read:

"3.6.1.1. The plates are fixed perpendicular to the force application devices and move in the transverse direction. For alignment purposes, each plate is attached to the application device in a manner that allows for rotation about the vehicle's y-axis. In this manner, the face of each plate remains parallel to the vertical plane which passes through the vehicle's longitudinal centreline."

Paragraph 3.6.3., amend to read:

"3.6.3. The force application plate is positioned such that the long edge of the plate is as close to the interior edge of the door as possible, but not such that the forward edge of the forward plate and the rear edge of the rear plate are more than 12.5 mm from the respective interior edges."

Paragraph 3.7.1., amend to read:

"3.7.1. The force application plate is 300 mm in length, and 50 mm in width, and at least 15 mm in thickness. The plate edges are rounded to a radius of 6 mm \pm 1 mm."

Insert a new paragraph 3.7.1.1., to read:

"3.7.1.1. The plates are fixed perpendicular to the force application devices and move in the transverse direction. For alignment purposes, each plate is attached to the application device in a manner that allows for rotation about the vehicle's y-axis. In this manner, the face of each plate remains parallel to the vertical plane which passes through the vehicle's longitudinal centreline."

Paragraph 3.7.3., amend to read:

"3.7.3. The force application plate is positioned such that the long edge of the plate is as close to the interior edge of the door as possible, but not such that the forward edge of the forward plate and the rear edge of the rear plate are more than 12.5 mm from the respective interior edges."

Insert a new paragraph 3.12., to read:

"3.12. Apply a preload of 500 N to each actuator and "zero" the displacement measuring device."

Paragraph 4.1., amend to read:

"4.1. Increase the force on each force application device as linearly as practicable until a force of 9,000 N is achieved on each force application device in not less than 90 seconds and not more 120 seconds, or until either force application device reaches a total displacement of 300 mm."

Paragraph 4.4., amend to read:

"4.4. Maintain the force application device position of paragraph 4.3., and within 30 seconds, measure the separation between the exterior edge of the doorframe and the interior of the door along the perimeter of the door."